

SIX DEVICES PERFECTED BY MINING ENGINEERS

Five Involve Saving of Human Life, and Other Conservation of Natural Resources.

RESCUE APPARATUS IMPROVED

Certain Processes Patented With Purpose of Reducing Cost of Making Radium and Prevent Monopoly.

[Special to The Times-Dispatch.] Washington, May 29.—Engineers of the United States Bureau of Mines have recently perfected six devices, five of which indirectly involve the saving of human life and the sixth the saving from waste of natural resources. In each instance, application has been made for patent in order to retain these devices for the use of the people without the payment of royalty, and to prevent any commercial concern from gaining a monopoly in their manufacture.

Perhaps the most important of the inventions that are to be dedicated to the free use of the people relate to improvements in the rescue apparatus worn by miners following disasters. This apparatus, which supplies oxygen to the rescuer, permits him to enter poisonous gases, and carry on his work a period of two hours in the Bureau of Mines' experience with this oxygen-breathing device, three rescuers have lost their lives, and in each instance it is believed their deaths were due to certain defects in the apparatus. This led to a desperate attempt upon the part of the engineers to construct an apparatus that would be reasonably safe. The engineers found considerable difficulty in the absorption of the poisonous matter of the breath in the apparatus, and also in the reduction of the high pressure oxygen carried in the tanks on the back of the rescuer. Both problems were submitted to William E. Gibbs, consulting engineer of the bureau, and after research covering several months, the solution of both problems is announced in applications made for patents. The cause of the difficulty used in the apparatus in taking up the poisonous exhalations of the breath has been so adjusted as to permit a continuous flow of the expired air. A series of successful experiments have already been made upon this device.

NEW TYPE OF VALVE

SOLVES ONE PROBLEM The second problem—the reduction of the oxygen pressure of 2,000 pounds to the square inch to the proper amount needed by the rescuer—has been accomplished by the invention of a new type of valve. The apparatus at present reduces the oxygen pressure, but supplies the oxygen at a constant rate, no matter how much the wearer needs. With the new valve, the supply of oxygen is regulated by the demands of the wearer of the apparatus, and the oxygen goes to waste through a relief valve as in the devices now in use. In making these improvements for safety, Mr. Gibbs has succeeded in reducing the weight of the breathing apparatus fully 40 per cent. The apparatus at present weighs forty pounds, which proves a serious handicap to the rescuer in his work.

A third invention is that of a collapsible mine cage for use in rescue work following a mine disaster. Often the mine cage is so badly shattered by the effect of explosions that it cannot be operated. In such instances, it is claimed, the collapsible cage would save hours of delay in rescue work and perhaps be the means of saving many lives. The designer of this cage is George S. Rice, the chief mining engineer of the Bureau of Mines.

J. W. Paul, engineer in charge of the mine rescue work of the Bureau of Mines, is the inventor of an electrical signaling device for use in shafts, especially following disasters. With this device, a person descending a shaft will be able to signal the hoisting engineer. If the man on the cage is overcome and the apparatus falls from his hands, a circuit is immediately closed and a gong in the engine-house gives a sudden warning. Such a device, it is claimed by Mr. Paul, would have been useful at the Cherry mine fire in Illinois several years ago, where so many men lost their lives. The rescue crews there had to subject themselves to unnecessary dangers in descending the wrecked shaft, because of means of signaling. The device is so arranged that the use of human intelligence to direct the giving of a prearranged code of signals, the gong on the surface and in the engine-house would ring continuously, which, in every case would be the signal to hoist immediately.

PURPOSE IS TO REDUCE COST OF MAKING RADIUM

The bureau has also applied for a number of patents on processes for extracting vanadium, uranium and radium from ores, such as carnotite ore. These processes are the result of the work of the Denver, Col., laboratory of the Bureau of Mines, and their purpose is to reduce the cost of making radium and to prevent the monopoly which goes with the so-called secret processes. The patents have been asked for in the names of Richard B. Moore, in charge of the Denver laboratory, and Carl Kihl, his assistant. With the great demand for radium in the treatment of cancer, the Bureau of Mines looks upon this invention as another possible means of saving human life. It is estimated that these new methods will cut the cost of radium fully one-half and perhaps more. They are to be for the use of any citizen of the United States.

Still another engineer of the bureau, Alfred G. Heagen, in charge of oil investigations, has invented a new type of valve or control casting head for oil wells, a device that will at once shut off the flow of gas or oil in a new well, and in that way stop the enormous waste of those resources that has been going on for years in the United States. The new valve has been tried in the Cushing oil field of Oklahoma, and has proved successful. It is said that in the past, it has been difficult to control many of the wells, and that millions of dollars worth of oil and gas have gone to waste. This new device, which, like the other inventions, is to be dedicated to the public, is expected to stop much of this waste.

MONTVALE

[Special to The Times-Dispatch.] Montvale, Va., May 29.—Mrs. P. C. Oney entertained in honor of the graduating class of the M. V. school on Tuesday evening. The guests of honor were Misses Nannie Coraeth Ferrell, Mary Louisa Ochsman, Phoebe Elizabeth Alphin, Ada Rudisill Birge, Sallie Oney and Ernest Oscar Howard. Among their friends present were Professor Herman Blankenship, principal of the Montvale High School, and R. A. Gilliam, cashier of the Bedford County Bank. Mr. and Mrs. Alexander Matheson, of Rocky Mount, were week-end visitors at Wayside, the home of Mr. and Mrs. James Bedford. Mr. and Mrs. F. R. Hall spent Tuesday at Roanoke. Mrs. Hyner and children, of Kentucky, are the guests of Mr. and Mrs. J. B. Ochsman.

HELD IN CONNECTION WITH DISAPPEARANCE OF CHILD

Father and Stepmother of Missing Nine-Year-Old Catherine Winters Arrested.

ROOMER IN HOUSE IN CUSTODY

Charge of Conspiracy to Commit Felony May Be Charged Later to Another Accusation.

Newcastle, Ind., May 30.—Dr. and Mrs. W. A. Winters, father and stepmother of Catherine Winters, aged nine, who disappeared from her home here more than a year ago, were arrested on their arrival here from Terre Haute to-day. They are charged with conspiracy to commit a felony. This makes three arrests in the case. W. H. Cooper, a former roomer in the Winters home, having been arrested late last night.

It was stated that the charge of conspiracy to commit a felony had been placed against the three, merely as a means of holding them, and that another charge might be preferred later.

The arrests followed assertions of police officers, who searched the Winters home, that they found, sealed in the basement, a red hat, a red shirt and a red undershirt and red sweater which had belonged to the missing child. The sweater, police officers declared, had holes in it which looked as if they were burned there, and the undershirt was stained as if by blood.

Cooper was a roomer at the Winters home at the time of the disappearance of the girl. He is twenty-eight years old.

SCHOOLS AT CHASE CITY CLOSE LABORS FOR YEAR

Interesting Exercises Are Held at Southside Institute and High School. Diplomas Are Awarded.

[Special to The Times-Dispatch.] Chase City, May 30.—Chase City's two schools, Southside Institute and the high school, came to a close this week, after one of the most successful years in their history. The closing exercises of the Southside Institute began with the baccalaureate sermon by Rev. J. T. Watts, of Richmond, on Sunday morning, and culminated with the graduating exercises on Tuesday evening. On Monday night the annual recital by the voice, piano and expression classes was given at the town hall. On Tuesday morning, on the school campus, the class exercises were rendered, followed by the laying of the corner-stone for the new \$25,000 building. In the town hall on Tuesday evening, the graduating exercises were held. The speaker, the principal, delivered the address, his subject being "The Creative Power of Human Mind." Professor Hunter the principal, delivered the address, his subject being "The Creative Power of Human Mind." Professor Hunter the principal, delivered the address, his subject being "The Creative Power of Human Mind."

Ye Ole Colonial Rag Rugs Appolo Rugs for Milady's Boudoir Japanese Matting Rugs

Tremont Standard Wool and Fibre Rugs

NORWOOD

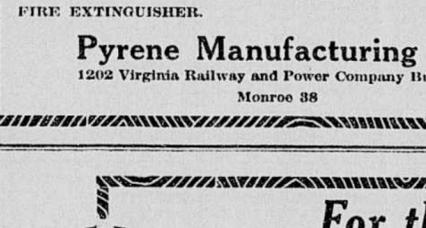
BICYCLES W. O. DOGGETT JR. 529 W. BROAD MONROE 172

B. LYRICETH'S COOLEST PLACE IN RICHMOND ALL WEEK, STARTING MON. MAT., JUNE 1. 10c 2 Mats. Daily 10c 2:00 3:30 10c 10c 2 Shows Daily 20c 7:30 9:00 20c LUBIN PRESENTS THE MOST POWERFUL PHOTO DRAMA OF THE YEAR THE DRUG TERROR Showing the Evil of Habit-Forming Drugs. A pulsating preachment in pictorial form, showing how drug fiends and white slavers work hand in hand. Sensational in story, but teaching a powerful lesson. Endorsed by authorities and clergy everywhere. Record-breaking crowds at New York, Chicago, Philadelphia and other cities. A play you will see. Things you should know. Next Week: New Attractions Changed Mon. and Thurs.

Miller & Rhoads Announce--for This Week--an Exhibit and Sale of Summer Rugs! Rugs of every description--for Porches, Halls, Dining Rooms, Living Rooms, Library and Bed Rooms

FOR THIS WEEK we have arranged an unusually large collection of RUGS, much larger than we have ever shown, including a number of styles of Rugs that are ENTIRELY NEW and are not shown by other stores! We believe every housekeeper will be interested in this sale, and suggest that you pay us a visit as soon as possible.

For Summer Homes Fibre, Rag and Grass Rugs; also Matting Are the Ideal Floor Coverings



You undoubtedly will be interested in our splendid lines of these new floor coverings. In selecting floor coverings, you want satisfaction—Rugs, etc., that will LAST! May we suggest that you see this exhibit before you decide on your summer purchases. Our prices are the lowest possible, consistent with good merchandise. Our full line of summer coverings will be ready for your inspection this week.

Aberdeen Wool and Fibre Rugs Plain centres, beautiful borders. An artistic and durable Rug, made in all the more popular colors to complete harmonious decorative effects. The Aberdeen Rug is very strongly woven, with both surfaces entirely covered with wool. The patterns have been carefully selected to conform to the best ideals of modern decoration. Aberdeen Rugs, for the 36x63-inch size, are... \$2.50 up to \$12.50 for a full room size—9x12 feet. You'll find them suitable in color and design for any room in the house.

Special Monday Imported Tokio Rugs \$5.95 A manufacturer's clean-up of 25 Tokio Rugs (a Rug similar to Crex), all in size 9x12 feet. Plain centres, with neat stenciled borders. This is an exceptional value.

Rattania Rugs for Porches and Rooms Rattania is the ideal Rug for the great outdoors. It is waterproof and practically soil-proof. It is the heaviest fibre Rug made—both sides alike—giving double the amount of wear of the ordinary Rug. 6x9-foot Rattania Rugs \$3.90 are specially priced at... The full room size (9x12 feet) is \$9.00, and the 36x72-inch size is \$1.30. Other sizes proportionately priced.

Hundreds of Rolls of New Matting Make your selection of Matting NOW—full 40-yard rolls of which are \$6.75, \$8.50 and \$9.50, instead of \$8.00, \$10.00 and \$12.00—while our stocks are complete, and we will make delivery when desired. SUBSTANTIAL SAVINGS and choicest variety are assured those who order NOW!

Special Monday Wool and Fibre Rugs at \$5 A well-known brand, and they sell usually at \$6.00. We have them in plain centres with borders, or in beautiful Oriental patterns; the colors are simply exquisite. You'll have to come early to benefit by this special offer, as there are ONLY 25 RUGS! And it is no small affair, either; it's FULL 9x12 FEET!

Y. O. Colonial Rag Rugs

Appolo Rugs for Milady's Boudoir

Japanese Matting Rugs

Tremont Standard Wool and Fibre Rugs

This Is Crex Week! Come In and Let Us Show You the New 1914 Patterns in This Ideal Floor Covering

The Universal Popularity of CREX is not so much due to its low price, as to its natural artistic beauty and to the cheerful atmosphere it gives a room or porch.

No longer is CREX considered appropriate only for porches, sun parlors and summer homes. To-day CREX coverings are found on most every floor of the home—the whole year round—and are giving the greatest satisfaction.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Small Colonial Rugs 59c and room sizes are \$8.00 to \$37.50, according to kind, shape and size.

Included are "Old Homestead," "Fairmont," "Heartside," "Poster," "Palestine," "Pilgrim," "Shaiki," "Dimitie"; also, the famous Grandmother Rag Rugs, in round and oval shapes.

Odd looking herringbone weaves and chintz borders; mottled effects, designed for veranda, sun parlor, conservatory, tea room and cottage. All hand-woven and finished perfectly. Small Colonial Rugs 59c

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

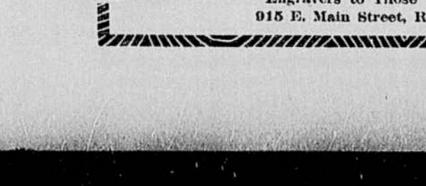
Crex Rugs are made in every size from 18x36 inches up to 12x15 feet, and we carry them all. If you desire to make selections from a stock that's absolutely complete, come to Miller & Rhoads. And, then, our Crex prices are the lowest in the city.

Fire Gives No Warning You may be next. Are you protected against a possible fire? If not, why not ask for a demonstration of the wonderful PYRENE FIRE EXTINGUISHER.

Pyrene Manufacturing Co. 1202 Virginia Railway and Power Company Building. Monroe 38

For the Bride of To-Day There's a distinct pleasure and satisfaction in the new ideas expressed in VIRSTACO WEDDING INVITATIONS, ANNOUNCEMENTS, CARDS AND SOCIAL STATIONERY.

for the quality and workmanship is the BEST obtainable. FREE for a limited time, a handsome \$2.00 copper card receiver made from your own plates. Ask for specimen book to-day. Virginia Stationery Co., Inc. Engravers to Those Who Know. 915 E. Main Street, Richmond, Va.



The "Home Comfort" Trunk Take a Rountree Wardrobe Trunk—needs no unpacking. \$18.00.

Just think of doing away with all that packing and unpacking on your next trip! Carry everything in this marvel—suits and dresses in the wardrobe side; waists and small articles in the chest of drawers on the other. Everything in its place!

The Best \$5.00 Bag We Know Of. We have made up our minds to offer the very best real Cowhide Bag in the city. This is the bag: Smooth cowhide, tan, brown or black; steel frame—a beauty; 16-inch size. Real Cowhide Suitcase at \$5.00 If you have priced Suitcases, you will know what it means to get a 24-inch Suitcase, steel frame, brass bolts and lock, beautifully made—at this price. The reason: "We are makers."



Rountree's FACTORY TO YOU